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(54) Title: A REAGENT SYSTEM AND METHOD FOR MODIFYING THE LUMINESCENCE OF LANTHANIDE(III) MACROCYCLIC COMPLEXES

(57) Abstract: Disclosed is a spectrofluorimetrically detectable luminescent composition consisting essentially of at least one energy transfer acceptor lanthanide(III) complex having an emission spectrum maximum in the range from 300 to 2000 nanometers and a luminescence-enhancing amount of at least one energy transfer donor selected from the group consisting of a fluorophore, a lumiphore, an organic compound, a salt of an organic ion, a metal ion, a metal ion complex, or a combination thereof. Such energy transfer donor enhances the luminescence of at least one energy transfer acceptor lanthanide(III) complex, with the conditions that the emission spectrum of any energy transfer donor differs from that of its energy transfer acceptor lanthanide(III) complex; and such energy transfer donor can be dissolved to form a unitary solution in a solvent having an evaporation rate at least as great as that of water.